CIVIL ONE ENGINEERS AND CONSULTANTS

(Civil Engineering Consultants, Third Party Inspection, PMC Material Testing Laboratory)
An ISO 9001: 2015 Certified Company

Name of Work : Drilling of Borewells and Maintenance of RO Plant in RR Nagar Constituency, BBMP, Bangalore.

Name of Client	:	**Executive Engineer, R R Nagar** Division, BBMP, Bangalore.
Contractor/Agency	:	**Sri. Nagasandra Ramarao Satish (Sathya Borewell Cleaning),** Contractor, Bangalore.
Est Cost	:	Rs. 100.00Lakhs
Date of Inspection	:	19.09.2020
Status of Bill	:	1st and Final bill
In the Presence of	:	(a) **Assistant Engineer (RR Nagar Division),** BBMP, Bangalore.
	:	(b) **Mr. Hemanth Kumar,** Engineer M/s Civil One Engineers & Consultants, Bangalore.

SI No. No	Description of the Item		Comments / observations
1	Raw water Feed pump with starter,Type-Horizontal ,Centrifugal.Make-Kirloskar/Beacon weir/Sumo/CNP(SS),Material of Construction-Cast Iron,Head-36 MWC. Motor-3.0HPthree phase.Starter-L&T Siemen make push botton type DOL Starter	:	Work done up to the billed quantity and Quality is satisfactory
2	Multi graded sand filter,type-verticle,Floor Mounted,Make-pentair/structural/ION EXCHANGE(INDIA) LTD/Zeolite/Aquario,min.operating Pressure 2.0kg/cm2,Max. Operating Pressure - 3.5kg/cm2, Treatment Flow Rate-6000liters/Hr,Type of valve size-Multiport,50NB,make-	:	Work done up to the billed quantity and Quality is satisfactory

QUALITY CONSULTANTS & ENGINEERS Bangalore

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಶವಂತಪುರ ಉಪ ವಿಭಾಗ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ

Office: #25/2, GF, 15th Cross, 2nd Main, Health Laout, Annapoorneshwarinagar, Nagarabhavi 2nd Stage, Bangalore-560091.
Mob: 9731166144

Scanned with CamScanner

CIVIL ONE ENGINEERS AND CONSULTANTS

(Civil Engineering Consultants, Third Party Inspection, PMC Material Testing Laboratory)
An ISO 9001: 2015 Certified Company

SI No. No	Description of the Item		Comments / observations
3	Activated carbon Filter type-Verticle,Floor Mounted,Make-pentair/Structural/ION EXCHANGE(INDIA) LTD/Zeolite/Aquario,min.operating Pressure 2.0kg/cm2,Max. Operating Pressure - 3.5kg/cm2, Treatment Flow Rate-6000liters/Hr,Type of valve size-	:	Work done up to the billed quantity and Quality is satisfactory
4	Water Softner,type-Verticle,Floor Mounted,Make-pentair/Structural/ION EXCHANGE(INDIA) LTD/Zeolite/Aquario,min.operating Pressure 2.0kg/cm2,Max. Operating Pressure 3.5kg/cm2, Treatment Flow Rate-	:	Work done up to the billed quantity and Quality is satisfactory
5	Antiscalant Dosing System,Equipment Required-Electronic Dosing Pump with Solution Tank,make-Ion Exchange (I) Ltd.,/ASIA LMI/Zeolite,Material of Construction-PP(Polypropelene),Discharge @Max Back Pressure-2.88litr/Hr	:	Work done up to the billed quantity and Quality is satisfactory
6	Accessories for Dosing System,Solution Tank-One No,Volume-100Litres,Material of Construction-HDPE,Tank level Switch-One No.	:	Work done up to the billed quantity and Quality is satisfactory
7	Reverse Osmosis System,Type-Horizontal Skid,Floor Mounted,Permeate water-Minimum 2000litr/hr,Maximum Permissable TDS in feed (PPM)-2500.	:	Work done up to the billed quantity and Quality is satisfactory
8	Pressure Vessel,Material of Construction-FRP,Make-Advance Composite/Code Line.	:	Work done up to the billed quantity and Quality is satisfactory
9	Membrane, Type-Brackish water . Nos required-Three.Make-TORAY JAPAN /Hydranautics/Filmtec/Tricep	:	Work done up to the billed quantity and Quality is satisfactory
10	High pressure pump,Type-verticle,multistage,Make-GRUNDFOS,MOTOR-7.5 HP 3Phase, Model-CRN series,Material of construction-SS316,starter-L&T/Seimens make push botton type DOL starter	:	Work done up to the billed quantity and Quality is satisfactory

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಹಕ ಅಧಿಯಂತರರು

Office: #25/2, GF, 15th Cross, 2nd Main, Health Laout, Annapoorneshwarinagar, Nagarabhavi 2nd Stage, Bangalore-560091.
Mob: 9731166144

Scanned with CamScanner

CIVIL ONE ENGINEERS AND CONSULTANTS

(Civil Engineering Consultants, Third Party Inspection, PMC Material Testing Laboratory)
An ISO 9001: 2015 Certified Company

SI No. No	Description of the Item		Comments / observations
11	Micron Filter,Type -JUMBO,Material of construction of housing-poly propelene	:	Work done up to the billed quantity and Quality is satisfactory
12	Instruction, Wet panel -Ms powder coated., Mounted on R.O> skid, Low pressure switch-one No,High Pressure Switch-one, Digitalconductivity Meter wiyh sensor , Indon brand-one No , ON/OFF selector Switch -one No. High pressure System Pressure Gauge	:	Work done up to the billed quantity and Quality is satisfactory
13	PH correction dosing System, Equipment Required-Electronic Dosing Pump with solution Tank, Make-Ion Exchange(1) Ltd.,/ASIA LMI/Zeolite,Material of construction -PP, Discharge @ max . Back Pressure-2.88 Lit/Hr@8Bar Discharge@Nominal Back	:	Work done up to the billed quantity and Quality is satisfactory
14	Solution Tank with level switch, Solution Tank one No, Volume-100 Liters. Material of construction-HDPE. Tank levelswitch-one No	:	Work done up to the billed quantity and Quality is satisfactory
15	Inter-connecting pipe work ,Raw water tank to feed pump suction and feed pump delivery to R.O. Inlet (up to High pressure pump in let)and RO outlet to Treated water tank-food Grade PVC pipe 40mm NB, Make-Finolex/ supreme High pressure pump outlet to	:	Work done up to the billed quantity and Quality is satisfactory
16	Ultra violet system, Model-UVS-20,Make-Ion Exchange (I) Ltd.,/ASIA LMI/Zeolite,ALFA Flow rate-2000L/H	:	Work done up to the billed quantity and Quality is satisfactory
17	Wending Machine ,Digital Swiping Card Type	:	Work done up to the billed quantity and Quality is satisfactory
18	Geophysical investigation of site for Sinking borewell for supplying drinking water to the habitations either through the hand pump,MWS,P.W.S.S by vertical electrical sounding by adpoting venner or Schlumberger's method,including reconnaissance survey of Geological	:	Work done up to the billed quantity and Quality is satisfactory

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಧಿಯಂತರರು
ಯಶವಂತಪುರ ಉಪ ವಿಭಾಗ
ಬೃಪತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ

CIVIL ONE ENGINEERS & CONSULTANTS Bangalore

Office: #25/2, GF, 15th Cross, 2nd Main, Health Laout, Annapoorneshwarinagar, Nagarabhavi 2nd Stage, Bangalore-560091.
Mob: 9731166144

Scanned with CamScanner

CIVIL ONE ENGINEERS AND CONSULTANTS

(Civil Engineering Consultants, Third Party Inspection, PMC Material Testing Laboratory)
An ISO 9001: 2015 Certified Company

IAS-ANZ ISO 9001:2008 CERTIFIED

SI No. No	Description of the Item		Comments / observations
19	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 300 PSIG & above 1100 CMF & above in all strata including over burden upto 20 M fixing of casing pipes, collars and cap with necessary cutting and threading including transportation of rig and supporting vehicals, crew charges and cost of consumables etc. complete	:	Work done up to the billed quantity and Quality is satisfactory
20	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 300 PSIG & above 1100 CMF & above in all strata including over burden upto 20 M fixing of casing pipes, collars and cap with necessary cutting and threading including transportation	:	Work done up to the billed quantity and Quality is satisfactory
21	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 300 PSIG & above 1100 CMF & above in all strata including over burden upto 20 M fixing of casing pipes, collars and cap with necessary cutting and threading including transportation of rig and supporting vehicals, crew charges	:	Work done up to the billed quantity and Quality is satisfactory
22	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 300 PSIG & above 1100 CMF & above in all strata including over burden upto 20 M fixing of casing pipes, collars and cap with necessary	:	Work done up to the billed quantity and Quality is satisfactory
23	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 300 PSIG & above 1100 CMF & above in all strata including over burden upto 20 M fixing of casing pipes, collars and cap with necessary cutting and threading including transportation	:	Work done up to the billed quantity and Quality is satisfactory
24	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 300 PSIG & above 1100 CMF & above in all strata including over burden upto 20 M fixing of casing pipes, collars and cap with necessary	:	Work done up to the billed quantity and Quality is satisfactory
25	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 300 PSIG & above 1100 CMF & above in all strata including over burden upto 20 M fixing of casing pipes, collars and cap with necessary cutting and threading including transportation	:	Work done up to the billed quantity and Quality is satisfactory

CIVIL ONE ENGINEERS & CONSULTANTS Bangalore

Office: #25/2, Gf, 15th Cross, 2nd Main, Health Laout, Annapooneshwarinagar, Nagarabhavi 2nd Stage, Bangalore-560091.
Mob: 9731166144

Scanned with CamScanner

SI No. No	Description of the Item		Comments / observations
26	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 300 PSIG & above 1100 CMF & above in all strata including over burden upto 20 M fixing of casing pipes, collars and cap with necessary cutting and threading including transportation	:	Work done up to the billed quantity and Quality is satisfactory
27	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 300 PSIG & above 1100 CMF & above in all strata including over burden upto 20 M fixing of casing pipes, collars and cap with necessary	:	Work done up to the billed quantity and Quality is satisfactory
28	Providing and fixing 250mm dia PVC (casing pipe)	:	Work done up to the billed quantity and Quality is satisfactory
29	Supply of ISI Mark 175mm nominal Bore, Plain end steel casing Pipe-grade of steel Fee 4100 of wakk thickness 504mm thick confirming to IS 4270:2001 and latest amendments, electric resistance welded steel electric or basic oxygen process in fandom length of 5 to 7mtr. Both ends threaded	:	Work done up to the billed quantity and Quality is satisfactory
30	Providing 175mm Dia M.S. Collar	:	Work done up to the billed quantity and Quality is satisfactory
31	Providing 175mm dia Bore Cap CE (M)	:	Work done up to the billed quantity and Quality is satisfactory
32	Atalanta suguna CRI KIRLOSKAR and other equipments pumps 10.00 HP/7.5 KV (20 stage)	:	Work done up to the billed quantity and Quality is satisfactory
33	Providing and fixing in trenches galvinised/mild steel tube 50mm dia nominal bore with all fittings (earth work in trenches to be measured and paid for seperately) including	:	Work done up to the billed quantity and Quality is satisfactory
34	Supplying and drawing 3 core flat PVC sheathed submersible pump cable maufactured with electrolytic grade copper with flexible	:	Work done up to the billed quantity and Quality is satisfactory
35	Providing and fixing in position 50mm Nominal bore non-return valve vertical type of approved make including cost of all	:	Work done up to the billed quantity and Quality is satisfactory
36	Spplying and fixing 50mm GI Union.	:	Work done up to the billed quantity and Quality is satisfactory

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಧಿಯಂತರರು
ಲೋಕೋಪಯೋಗಿ ಉಪ ವಿಭಾಗ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ

CIVIL ONE ENGINEERS & CONSULTANTS Bangalore

Scanned with CamScanner

CIVIL ONE ENGINEERS AND CONSULTANTS

(Civil Engineering Consultants, Third Party Inspection, PMC Material Testing Laboratory)
An ISO 9001: 2015 Certified Company

SI No. No	Description of the Item		Comments / observations
37	Spplying and fixing 50mm GI Elbow.	:	Work done up to the billed quantity and Quality is satisfactory
38	Spplying and fixing 50mm GI Nipple.	:	Work done up to the billed quantity and Quality is satisfactory
39	Spplying and fixing 50mm GI Hose colleres	:	Work done up to the billed quantity and Quality is satisfactory
40	Supplying and fixing 20" x 20" x 2.5" polished wood board made of not less than 15mm thick plank on both the sides with planks made out of not more than 2 pieces and fixing the same to the wall using tapered inverted wooden plugs screws etc.,	:	Work done up to the billed quantity and Quality is satisfactory
41	Supplying and fixing miniature circuit breakers on existing MCB distribution board using necessary fixing materials and 'C' type curve indicator ON/OFF energy cross-3 with short circuit breaking capacity of 10K and complete	:	Work done up to the billed quantity and Quality is satisfactory
42	Supplying of TPST with rewirable porcelain channels in SM encloser made out of 14 SWG powder coated point of approved colour 32 amps	:	Work done up to the billed quantity and Quality is satisfactory
43	Supplying and fixing LED type panel board indicating lamp with required colour suitable for 220 V AC 50 HZ 12/24 V DC	:	Work done up to the billed quantity and Quality is satisfactory
44	Suppling fully automatic star delta starter unit push button type with suitable wires 2 conductors and adjustable thermal timer mounted on a common base plate held in steel enclosure for use on 400/440 volts phase and	:	Work done up to the billed quantity and Quality is satisfactory
45	Supplying and fixing single phase preventer using necessary wires over an existing panel board suitable for motar up to 20 HP capacities	:	Work done up to the billed quantity and Quality is satisfactory
46	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade multistrand copper conductor single core wire in open or concealed system of wiring as per IS 694:1990 & conforming to the attached GTP of group (	:	Work done up to the billed quantity and Quality is satisfactory

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಧಿಯಂತರರು

Office: #25/2, GF, 15th Cross, 2nd Main, Health Laout, Annapoorneshwarinagar, Nagarabhavi 2nd Stage, Bangalore-560091.
Mob: 9731166144

Scanned with CamScanner

SI No. No	Description of the Item		Comments / observations
47	Supplying fixing and wiring heavy duty low voltage capacitors conforming to IS 2834 phase 400/440 volts grade, for power factor improvement of rotating machinery.	:	Work done up to the billed quantity and Quality is satisfactory
48	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C cotouts and other equipments on the meter board using 40mm dia 2.90 thick GI pipe 2.5 mtr long buried in a pit... The pit should be filled with equal proprotion of salt and charcoal 150mm	:	Work done up to the billed quantity and Quality is satisfactory
49	Digging of trench of 0.36mtrs deepx0.5 mtrs wide refilling the trench to the required gorund level and consolidating etc., complete	:	Work done up to the billed quantity and Quality is satisfactory
50	Supplying of 1.1 KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded Inner sheath armoured UG LT cable as per IS-1554 (Part-1) or IS-7098 Part-1, Armouring strip thickness in average +5% and resistivity 14 Ohms/Kms (Max) as per IS-3975 4 core 16	:	Work done up to the billed quantity and Quality is satisfactory
51	Labour charge for laying 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe/ on wall / on poles as required in existing trench/duct. 6 sq mm to 16 sq mm	:	Work done up to the billed quantity and Quality is satisfactory
52	Supplying and fixing class-A(medium duty) GI pipe wall thickness not less then 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1KV class 40mm	:	Work done up to the billed quantity and Quality is satisfactory
53	Supplying and fixing LT cast iron pot heads suitable for 1.1KV class UG cable filled with necessary bitumen / insulating compound complete with terminals,clamps bolts and nuts and washer etc.,complete for 16 sq mm as per specifications.	:	Work done up to the billed quantity and Quality is satisfactory

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಹಕ ಅಧಿಯಂತರರು
ಯಶವಂತಪುರ ಉಪ ವಿಭಾಗ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ

CIVIL ONE ENGINEERS & CONSULTANTS Bangalore

Scanned with CamScanner

CIVIL ONE ENGINEERS AND CONSULTANTS

(Civil Engineering Consultants, Third Party Inspection, PMC Material Testing Laboratory)

An ISO 9001: 2015 Certified Company

IAS:ANZ ISO 9001:2008 CERTIFIED

Sl No. No	Description of the Item		Comments / observations
54	Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers. 63 amps	:	Work done up to the billed quantity and Quality is satisfactory
55	Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials upto a lead of 1000 meters, stacking	:	Work done up to the billed quantity and Quality is satisfactory
56	Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in hard soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches,	:	Work done up to the billed quantity and Quality is satisfactory
57	Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings, this includes	:	Work done up to the billed quantity and Quality is satisfactory
58	Making connection of G.I.distribution branch with G.I.main of 25mm to 40mm. Nominal bore, including cutting and threading the pipes,providing and fixing Tee, nuts,labour for all item of works,testing and HOM of equipments complete as per specifications.	:	Work done up to the billed quantity and Quality is satisfactory
59	Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes conforming to IS 15778 having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings, this includes jointing of pipes and fittings with one step solvent cement, trenching, refilling & testing of joints	:	Work done up to the billed quantity and Quality is satisfactory
60	Providing and fixing to wall, ceiling and floor Medium density polyethylene pipes 6.00 kgf/sq.cm working pressure 25mm outside diameter with special flange, compression type fittings, wall clips, making good the wall,	:	Work done up to the billed quantity and Quality is satisfactory

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಶವಂತಪುರ ಉಪ ವಿಭಾಗ

CIVIL ONE ENGINEERS & CONSULTANTS Bangalore

Office: #25/2, GF, 15th Cross, 2nd Main, Health Laout, Annapoorneshwarinagar, Nagarabhavi 2nd Stage, Bangalore-560091.

Mob: 9731166144

Scanned with CamScanner

SI No. No	Description of the Item		Comments / observations
61	KSRB 2-4 : Refilling available around earth pipe lines,cables in layers mot exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. And lift upto 1.5m. Including cost of all labour complete as per specifications.	:	Work done up to the billed quantity and Quality is satisfactory
62	Loading and unloading of stone boulder/stone aggregates/sand/kanker/ moorum. KSRRB M100-1:Placing tipper at loading point, loading with front end loader,dumping, turning for return trip, excluding time for haulage and return trip complete as per	:	Work done up to the billed quantity and Quality is satisfactory
63	KSRB 2-4 : Providing and fixing in position brass gate valve with C.I.wheel of approved quality (screwed end) 50mm nominal bore including cost of all materials,labour and HOM of equipments with all leads complete as per specifications.	:	Work done up to the billed quantity and Quality is satisfactory
64	KSRB13-6.2-1 : Providing and fixing in position brass stop cock of approved quality 15mm nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specifications.	:	Work done up to the billed quantity and Quality is satisfactory
65	KSRB 4-1.3 : Providing and laying in position plain cement concrete of mix 1:4:8 with OPC cement @ 180kgs, with 40mm and down size graded granite metal coarse aggregates @0.85cum and fine aggregates @ 0.57cum machine mixed, machine mixed, concrete laid	:	Work done up to the billed quantity and Quality is satisfactory
66	Providing and laying cement concrete using 20 mm and down size granite coarse aggregates and fine aggregates of ready mixed concrete (RMC) M 20 for R.C.C works laid in 15 cms thick layers and well compacted vibrating, curing, for foundations & sub-structure works	:	Work done up to the billed quantity and Quality is satisfactory

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಯಶವಂತಪುರ ಉಪ ವಿಭಾಗ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ

For CIVIL ONE ENGINEERS & CONSULTANTS

Authorised Signatory

Scanned with CamScanner